

What we claim is:

1. A level measuring instrument operating with microwaves in order to measure a level of a filled product (11) in a container (3), having
 - a microwave generator (13),
 - for producing microwaves at frequencies of greater than 40 GHz,
 - an antenna (9, 9a) which is powered by the microwave generator (13) and is used to transmit the microwaves in the direction of the filled product,
 - an antenna (9, 9b) which is used to receive microwaves reflected at a filled product surface, and
 - a reception and evaluation circuit (15)
- 5 - which ascertains a transit time for the microwaves and uses this to determine the present level.
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2. The level measuring instrument operating with microwaves as claimed in claim 1, in which the microwave generator (13) is arranged directly on the antenna (9, 9a).

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3. The level measuring instrument operating with microwaves as claimed in claim 1, in which the microwave generator (13) is connected to the antenna (9) by means of a passive waveguide (33).

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4. The level measuring instrument operating with microwaves as claimed in claim 3, in which the passive waveguide (33) is a hollow waveguide.

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The level measuring instrument operating with microwaves as claimed in claim 1, in which a product comprising an aperture of the antenna and a wavelength of the microwaves is much less than 500 mm².

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6. The level measuring instrument operating with microwaves as claimed in claim 1, in which the filled product (11) is a bulk product, and in which the wavelength of the microwaves is in the order of magnitude of a mean particle size of the bulk product or is less than this particle size.

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